What is claimed is:

1. A method of electrodepositing a layer of tin or tin-alloy on a substrate, comprising:

electrolytically treating a substrate with a solution comprising a phosphoric acid and a carboxylic acid; and

electrodepositing a layer of tin or tin-alloy on a surface of the treated substrate.

2. The method according to claim 1, wherein the substrate is constructed of a copper-containing metal or metal-alloy.

3. The method according to claim 2, wherein the substrate is constructed of copper.

4. The method according to claim 1, wherein the electronic device substrate is a printed wiring board substrate, a lead frame, a semiconductor package, a chip capacitor, a chip resistor, a connector, or a contact.

5. The method according to claim 5, wherein the electronic device substrate is a lead frame.

6. The method according to claim 1, wherein the phosphoric acid is orthophosphoric acid present in the solution an amount of from 20 to 80 % by volume.

7. The method according to claim 1, wherein the carboxylic acid is malic acid, tartaric acid, citric acid, lactic acid, or a combination thereof.

8. The method according to claim 1, wherein the carboxylic acid is a hydroxycarboxylic acid.

9. The method according to claim 1, wherein the solution further comprises an alkali metal hydroxide.

10. The method according to claim 1, wherein the solution further comprises an organic solvent.

11. The method according to claim 10, wherein the organic solvent is ethylene glycol, propylene glycol, glycerin, ethanol, isopropyl alcohol, or a combination thereof.

12. The method according to claim 1, wherein the step of electrolytically treating is conducted at a voltage effective to polish the surface of the substrate.

13. A method of electrodepositing a layer of tin or tin-alloy on a substrate, comprising:

electrolytically treating a substrate with a solution comprising from 50 to 80% by volume of a carboxylic acid; and

electrodepositing a layer of tin or tin-alloy on a surface of the treated substrate.

14. The method according to claim 13, wherein the solution further comprises a phosphoric acid.

15. The method according to claim 13, wherein the carboxylic acid is malic acid, tartaric acid, citric acid, lactic acid, or a combination thereof.

16. The method according to claim 13, wherein the carboxylic acid is a hydroxycarboxylic acid.

17. The method according to claim 1, wherein the step of electrolytically treating is conducted at a voltage effective to polish the surface of the substrate.